EXHIBIT
3.1

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
WESTERN DIVISION

UNITED STATES OF AMERICA,	)	CIVIL ACTION NOS.
	)	99-30225-MAP
	)	(Consolidated)
Plaintiff,	)	
	)	
v.	)	
	)	
GENERAL ELECTRIC COMPANY,	)	
	)	
Defendant.	)	

DECLARATION OF BRYAN D. OLSON IN SUPPORT OF PROPOSED GE-PITTSFIELD/HOUSATONIC RIVER SITE CONSENT DECREE, MEMORANDUM IN SUPPORT OF MOTION TO ENTER, AND RESPONSE TO PUBLIC COMMENTS

I, Bryan D. Olson, hereby depose and state as follows, to the best of my information and belief:

1. I am an Environmental Engineer with the United States Environmental Protection Agency ("EPA"), Office of Site Remediation and Restoration, located in Boston, Massachusetts. I have been employed by EPA for approximately 10 years. I have been employed as a staff person in the Office of Site Remediation and Restoration (formerly the Waste Management Division) ("OSRR") for all of those years. During that time, I have been involved with permitting and enforcement under the Resource Conservation and Recovery Act ("RCRA"), site cleanup under both RCRA and Superfund, and, for the last seven years, have been coordinating EPA's efforts on the GE-Pittsfield/Housatonic River

Site ("Site"). My current title is the GE/Housatonic Team Leader. I have a Bachelor of Science degree in Civil Engineering from the University of New Hampshire, located in Durham, New Hampshire.

2. As a staff person in OSRR with EPA, I have overseen the investigation and/or response to a number of sites including: Monsanto Chemical Company in Springfield, Massachusetts; Galileo Electro Optics in Sturbridge, Massachusetts; and the GE Site in Pittsfield, Massachusetts The investigations and remedies for these sites included soil, groundwater and sediment investigations; soil removal; groundwater treatment; free-phase oil removal and treatment; and sediment/floodplain soil removal.

3. In my current position as GE/Housatonic Team Leader my responsibilities include oversight of all aspects of the work at the Site, including the coordination of several full and part-time members of EPA's GE/Housatonic Team.

4. I am familiar with the response actions that have been, are being, and are proposed to be undertaken at the Site and with documents relating to such response actions. I have reviewed the "United States' Memorandum in Support of Motion to Enter Consent Decree" (the "Memorandum") and the "United States' Response to Comments on the Proposed Consent Decree" prepared by EPA and Department of Justice attorneys in this matter. The technical information contained in Response Numbers 26,28(C), 28(G), 32, 37, 39 through 49, 53 through 57, 61, 64, 66, 67, and 69 through 75 and in Sections III.A. 1. (Background), III.B. 1. (Background), and III.E. 1 (Introduction) in the Response to Comments is based upon my knowledge of the Site or documents in the Administrative Record, or both, and is accurate to the best of my knowledge.

5. The General Electric Company ("GE") has submitted Work Plans for four of the Removal Actions Outside the River, has submitted the Field Sampling Plan/Quality Assurance Project Plan portions of the Project Operations Plan, has submitted a Baseline Monitoring Program Proposal for one Groundwater Management Area, and is continuing source control investigation, design and implementation activities. These submittals were made pursuant to Paragraph 16 of the Consent Decree for the Site.

6. On February 9, 2000, I attended a meeting at EPA's Boston office with representatives of the Tennessee Gas Pipeline Company ("Tennessee Gas"). In attendance for Tennessee Gas were James D. Hartman, Stephen Morawski, and David S. Blackmar (outside counsel for Tennessee Gas). The representatives from Tennessee Gas identified two areas, in the Site that contain Tennessee Gas easements: a small portion of the Unkamet Brook area (see Appendix E, Statement of Work Figure 2-3), and a floodplain property located downstream of the confluence (see Appendix E, Statement of Work Figure 2-l 1). According to my review of existing analytical sampling results, the easement in the Unkamet Brook area is located in an area that has levels of PCB contamination which are below 25 ppm, the performance standard chosen by EPA to be protective of non-emergency, long-term utility work.

7. I have estimated that the approximate cleanup cost for the Site is in the range of $300 million to greater than $700 million. These numbers are rounded due to the uncertainty described below in Paragraph 8. This estimate is based upon the assumption that each Removal Action Outside the River will be addressed as described in the Statement of Work attached as Appendix E to the Consent Decree, that the Upper ½ Mile Reach will

be addressed as described in the Upper ½ Mile Reach Removal Action Work Plan attached as Appendix F to the Consent Decree, and that the 1 ½ Mile Reach will be addressed in a manner generally consistent with the Upper ½ Mile Reach Removal Action and with the alternatives analyzed in the final draft Engineering Evaluation and Cost Analysis for the 1 ½ Mile Reach; dated February 11, 2000, and that the Rest of River cleanup could include a range of alternatives from monitored natural attenuation to a removal of sediments and soils similar to the removal actions selected for the Upper Two Mile Reach. The estimate is also based upon best professional judgement, my discussions regarding the cost of the work with project managers on EPA's GE/Housatonic Team and other parties involved in the cleanup project, experience with the cost of remedies at other similar sites, and the general unit cost to excavate and consolidate PCB contaminated soil. The following lists the approximate cleanup cost for the different portions of the Site.

Allendale School - $7 million;

Remainder of the Removal Actions Outside the River (Silver Lake, GE Plant, Former Oxbows, Groundwater, Unkamet Brook, and Floodplain Properties) - $100 million;

Upper ½ Mile Reach and Source Control - $15 million;

1 ½ Mile Reach - $50 million; and

Rest of River - $100 million to greater than $500 million.

8. The estimates of Site cleanup costs contained in the preceding Paragraph 7 are approximations only. The final Site cleanup cost could be significantly different than the estimate depending upon such factors as the amount of soil removal, unexpected

conditions, the cost of inflation, contractor's bids for work, and the remedy selected for the Rest of the River. For example, the amount of excavation and removal of PCB contaminated soil for some areas, and thus the cost of response, will depend on the results of soil sampling that has yet to be performed. Also, the cost of the remedy for the Rest of the River is also uncertain because EPA has not selected a final remedy and has not completed investigations or set cleanup levels.

9. Pursuant to the Consent Decree, I estimate that EPA will recover up to approximately $70 million in cost recovery from GE. The exact amount of one category of costs, Past Response Costs, is fixed by Paragraph 94 of the Consent Decree. Other categories of costs, such as U.S. Future Additional Sampling Costs, are not fixed amounts but are subject to cost limits. For purposes of the estimates for these categories, I estimated that EPA will recover up to the cost limit. One category of costs, U.S. Future Response Costs, is unlimited, and I estimated a reasonable amount of cost reimbursement that will occur under this category.

U.S. Past Response Costs - $13,495,738.
This amount is to reimburse EPA for its past costs and is established by Paragraph 94 of the Consent Decree.

U.S. Oversight Costs (except for Rest of River Oversight Costs) – up to $11 million. This amount is to reimburse EPA for its costs incurred in overseeing GE's work, except for any oversight of GE's work in the Rest of the River. This amount is capped at $11 million.

U.S. Future Additional Sampling Costs – up to $400,000.
This amount is to reimburse EPA for sampling EPA conducts in areas outside the Housatonic River. This amount is capped at $400,000.

U.S. Future Response Costs – approximately $5 million.

This amount is to reimburse EPA for the cost of all time EPA incurs other than oversight, such as attorney time and time to compile cost documentation. This amount does not include reimbursement of EPA time for a number of events that may never occur, such as an EPA takeover of the work. For the life of the decree, I estimate EPA will be reimbursed approximately $5 million.

U.S. Post-Removal/Groundwater Monitoring Costs – approximately $2.5 million. This amount is to reimburse EPA for its costs incurred in overseeing GE's groundwater work and post-removal site control work (i.e.,, operation and maintenance). This amount is capped at $250,000 per year. Although the estimate is approximate, calculating at least ten years of such oversight is realistic and reasonable.

U.S. Future Rest of River Capped Response Costs – $14.5 million. This amount is to reimburse EPA for the costs it incurs sampling and conducting other Rest of River investigations and studies. This amount is capped at $14.5 million.

U.S. Rest of River Oversight Costs – $25 million. This amount is to reimburse EPA for the costs incurred in overseeing GE's work on the Rest of the River. It is capped at $25 million.

10. I estimate that GE will pay for between approximately 90 and 97 percent of the total costs incurred at the Site. The 90 percent figure assumes total values for unreimbursed EPA expenditures on the high end, at approximately $30 million, and the value of GE's work in the Rest of the River at the low end (approximately $100 million), with the total cost of GE's work at the Site valued at approximately $300 million. The 97 percent figure assumes total values for unreimbursed EPA expenditures on the low end, at approximately $20 million, and the value of GE's work in the Rest of the River at the high end (approximately $500 million), with the total cost of GE's work at the Site valued at approximately $700 million.

11. The On-Plant Consolidation Areas ("OPCA") are located hydrologically down-gradient from the Allendale Elementary School and the surrounding residences. The discharge point for any leachate from the OPCAs, the Housatonic River, is over 1000 feet from the

Hill 78 OPCA area. Because the groundwater in the area moves at an approximate average velocity of four inches a day, it would take many years for the groundwater from the OPCAs to reach the Housatonic River.

12. It is my opinion that the process for making a decision for the Rest of the River Remedial Action requires more complex investigations and studies than the cleanup for the Upper 2-Mile Reach of the Housatonic River. In addition, the Rest of the River Remedial Action is a potentially more expensive cleanup action than the remediation of the Upper 2-Mile Reach. The Rest of the River Remedial Action will consider the remaining length of the Housatonic River, over 100 river miles, which includes substantial stretches of broad floodplains and varied habitat.

13. EPA has incorporated its PCB contamination concerns into its review of Federal Energy Regulatory Commission ("FERC") relicensing plans for the Housatonic River. See November 30, 1999 EPA letter to FERC. The state and federal government agencies will strive to coordinate respective activities as much as possible.

14. Based in part on public input, changes were made to the Upper ½ Mile Reach Removal Action, the Allendale School Removal Action, and the preparation of the On-Plant Consolidation Areas, including the placement of a liner and leachate collection system under the Building 71 consolidation area, a more conservative approach to selecting removal areas in the Upper ½ Mile Reach resulting in greater excavation than was previously proposed, a revision of the capping strategy in the Upper ½ Mile Reach resulting in a more uniform cap and a more comprehensive program for long-term monitoring, maintenance and corrective action in the Upper ½ Mile Reach.

15. For the Rest of River, EPA is currently conducting investigations, as described more fully in Section I.D. of the Memorandum. EPA anticipates proposing a remedial action for the Rest of River in the year 2003.

16. EPA has reviewed records from the Pittsfield Assessors Office and the Pittsfield Department of Public Works and has interviewed citizens of the applicable neighborhoods and could not locate a drinking water well within the "Area of Concern" as described in the Well Drilling Regulations of the City of Pittsfield, Department of Health, effective December 16, 1999.

17. EPA and the Massachusetts Department of Environmental Protection ("MADEP," collectively the "Agencies") held a "bankers forum" on January 182000. At the forum, the Agencies described the two cleanup options available to the commercial property owners at the Site, and the Agencies and representatives from three area banks that engage in commercial lending answered questions from the public. The purpose of the forum was to allow commercial property owners at the Site to hear from the Agencies and the banks directly. At the forum, the bankers stated that the Consent Decree will improve the lending climate for commercial properties.

18. I declare under penalty of perjury that the foregoing is true and correct.

DATED this 17th day of July, 2000.

Bryan D. Olson

Bryan D. Olson, GE/Housatonic Team Leader
U.S. Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

November 30, 1999

David P. Boergers, Secretary
Federal Energy Regulatory Commission
Mail Code: DLC, HL-11.1
888 First Street, N.E.
Washington, DC 20426

Re: Final License Application for FERC Project Nos. 2597 & 2576

Dear Mr. Boergers::

The U.S. Environmental Protection Agency, New England Regional Office (EPA) has reviewed the final application by the Connecticut Light and Power Company (CL&P) for a new license for the Falls Village and Housatonic River projects, FERC Project Nos. 2597 and 2576: This letter, -and the attached staff report, provide comments in response to the FERC Notice of Application Tendered for Filing dated September 15, 1999.

The Housatonic River and Falls Village projects are located on the Housatonic River in Litchfield, New Haven, and Fairfield counties, Connecticut. Together, these projects affect 76.4 miles of the 83.1 miles (92 percent) of the Housatonic in Connecticut. For relicensing purposes, theapplicant proposes to combine the two projects under a single project license entitled, the "Housatonic River Project."

EPA is the federal agency principally responsible for protection and enhancement of the nation's environment. EPA's responsibilities include administering the Clean Water Act (CWA), 33 U.S.C. § 1251 et seq., which establishes a national goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters in a way that provides for the protection and propagation of fish, shellfish, and wildlife, and provides for recreation in and on the water. The CWA also preserves the rights of states to plan the development and use (including restoration, preservation, and enhancement) of its land and water resources.

As you may know, EPA was recently involved in a landmark agreement between General Electric, the federal government, the Commonwealth of Massachusetts and state of Connecticut to clean up PCB contamination in and around the river north of the Housatonic River Project. We believe it is important to build on the General Electric experience and to look for opportunities to further restore the natural resources of the Housatonic. Changes to the CL & P operation can and should be an important part of the restoration process.

To that end, EPA provided comments on CL & P'sdraft license application and requested additional studies in July of 1999. Unfortunately, our comments and requests for additional studies, along with those submitted by other state and federal resource agencies and the public, were, for the most part, ignored or rejected by CL&P in the final application.

EPA views the relicensing process for the Falls Village and Housatonic River projects as a historic opportunity to restore aquatic habitat in one of Connecticut's most valuable natural and recreational resources. Decisions made in the past that established existing operatingmodes and practices did not reflect our Current knowledge and understanding of the importance of maintaining natural systems and biological diversity, nor the value society now places on ecological tntegtity. Regrettably, CL & P's lack of substantive responses to agency and public commentson the draft license application, as expressed in the final application, indicates an unwillingness to take advantage of this opportunity. We continue to encourage CL & P to change its approach to the project and the relicensing process.

As you know, minimum flows in bypasses and streamflow fluctuations have been raised as an issue by resource agencies since the beginning of the'relicensing process. Comment letters from EPA, CT DEP, and the U.S. Fish and Wildlife Service (USFWS) on the Initial Consultation Document and on the Draft Application all'sought instantaneous run of river operation at Bulls Bridge and Falls Village Projects, minimum flow releases in the bypass reaches at each of these dams which would comply with the Fish and Wildlife Service Aquatic' Base Flow (ABF) recommendations and changing the Current bulk release pattern at the Stevenson Dam to a continuous flow closer to ABF. EPA strongly supports these types of operational changesand believes they are necessary to provide adequate fish and other aquatic life habitat and to meet applicable requirements of the state water quality standards and urges CL & P to make them in a manner consistent with the advice of the EPA and our fellow resource agencies

EPA's comments in the attachment to this letter focus on water quality and in-stream flow conditions related to the CL & P license request and information we still believe must be provided as part of a comprehensive license request for the proposed project.

Thank you for the opportunity to comment on the final license application for the Housatonic River Project: Should you have any questions about this letter, require further information, or wish to arrange meeting to discuss our comments in greater detail, please feel free to contact Ralph Abele at (617) 918-1629 or Mel Cote at (617) 918-1553.

Sincerely,

John P. DeVillars
Regional Administrator

Attachment

cc: FERC Service List

Over the last several years EPA has encouraged states to look beyond chemical-specific criteria in the development and implementation of water quality standards. Inl991, the EPA Assistant Administrator for Water clarified this in a letter to the Secretary of the Federal Energy Regulatory Commission (FERC), stating that, "protection of water quality involves far more than just addressing water chemistry. Rather protection of water quality includes protection of multiple elements which together make up aquatic systems including the aquatic life, wildlife, wetlands, and other aquatic vegetation, and hydrology required to maintain the aquatic system.".

Pursuant to its statutory and regulatory authorities, EPA's review and resultant comments focus on issues related to water quality and in-stream flow conditions.

1. **Water Quality**

The current water quality classifications for the Housatonic River in Connecticut include D/B in the upper reach, C/B in the middle reach, and SC/SB in the lower reach. The Class B (freshwater) designation includes the following goal uses: recreational use; fish and wildlife habitat; agricultural and industrial supply; and other legitimate uses, including navigation. Although, as stated in the final application, trend analyses data indicate that some water quality parameters are improving, and that the improvements are consistent with those necessary to attain the river's Class B designated goal (as noted on page E-179 of the application), EPA needs further assurance that the proposed project operations will not negate any of the improvements made to date nor exacerbate existing water quality impairments.,

The final application notes that the Connecticut Department of Environmental Protection (CT DEP) has identified the Housatonic River and Lake Zoar *in the* report, *Connecticut Waterbodies Not Meeting Water Quality Standards, 1998,* pursuant to section 303(d) of the federal Clean Water Act (i.e., 303[d] list). The Housatomc River'is identified in this report as impaired for fish consumption due to the presence of PCBs in sediments, while Lake Zoar is identified as exhibiting low dissolved oxygen conditions due to hypolimnetic releases from Lake Lillinonah. Additional impairments in the Housatonic River watershed cited in the 1998 303(d) list include: eutrophication in Lake Lillinonah, Lake Zoar, and Lake Housatonic; a fish consumption advisory in Brewster Pond, and additional impairments in the Housatonic estuary (see 303[d] list for details).

Section 303 requires that total maximum daily load (TMDL) analyses be conducted for waterbodies not meeting water quality standards. A TMDL establishes the maximum amount of a pollutant that may be introduced into a waterbody and still ensure attainment and maintenance of water quality standards, even after the application of technology-based or other required controls. The state is scheduled to develop and submit to EPA for approval TMDLs for PCB contamination in the Housatonic River and for low DO in Lake Zoar by April 1, 2000.

It is the responsibility of the applicant fo demonstrate that proposed project operations will not

negate improvements in water quality achieved to date, nor contribute further to existing impairments as described in the 1998 303(d) list.

PCBs

'PCB contamination of river-bottom sediments is the primary water quality impairment in the Housatonic River. In general, PCB concentrations are highest in the sediments of the deeper impoundments (Lakes Lillinonah and Zoar). However, PCB concentrations in sediment core samples and fish tissue have been steadily declining since remediation activities at the General Electric (GE) facility in Pittsfield, Massachusetts began in the late 1970s, and are expected to continue to decline as a result of the recent PCB remediation plan agreed to by.EPA, GE, and the states of Massachusetts and Connecticut. The EPA/GE agreement includes the removal of PCB-contaminated sediments from the most severely contaminated segments of the Housatonic River: EPA-New England is currently reviewing the PCB remediation plan to determine if it satisfies the regulatory requirements for a TMDL.

In its comments on the draft application, EPA noted that previous water quality studies have not addressed the potential resuspension of contaminated sediments resulting from peaking operations at the four mainstem dams, and recommended that the applicant conduct a study to assess the potential for sediment resuspension, and related impacts to water quality and aquatic life, in association with proposed project operations. In the final application, the applicant refused to conduct any additional studies, and recommended that any studies regarding PCBs be directed to GE through the EPA/GE agreement or other means (e.g., RCRA corrective actions).

EPA again recommends that this study be conducted, especially given the status of the ~Housatonic River on the 303(d) list due to PCB-contaminated sediments and the fact that sediment resuspension has been documented at other hydropower projects. It is theapplicant's responsibility to demonstrate that the resuspension of PCB-contaminated sediments does not contribute to the river's impairment. This study will help determine whether the resuspension of contaminated sediments caused by the proposed project operations contributes to water quality impairments, and may also help identify additional remediation activities.

Dissolved Oxygen

Low dissolved oxygen is a significant problem in the bottom waters of Lakes Lillinonah and Zoar during a 6-8 week period in most summers. CT DEP is currently exploring the development of a TMDL to improve DO levels in Lake Zoar, and as indicated in the 1998 303(d) list, the terms of the FERC relicensing are expected to provide reasonable assurance for the attainment of current Class B DO criteria (not less than 5 mg/l at any time).

On p. E-12, the applicant proposes to install high efficiency porous line diffuser systems in each lake to offset low dissolved conditions in an effort to meet the state water quality standard of 5 mg/l, but admits that "maintaining a fixed level of DO is difficult for aeration systems in

hydropower applications," and that even with the aeration *system* in *operation,* numeric water quality criteria may not be met during particular conditions as identified on p. E-78 (Conceptual Design Report for the Shepaug Oxygen Diffuser System). Briefly, the conditions were identified as those during which: (1) DO demands change rapidly; (2) annual lake turn over occurs; (3) water flows beneath diffuser system; (4) spilling is required to help meet the DO target; and/or (5) high flow events occur with low DO levels in the reservoir.

On p. E-13, the applicant states that, "(t)he DO criterion that serves as the basis for the water quality standard for Shepaug relicensing can be modified as long as it supports the goals for water use in the river." The applicant proposes that site-specific DO criterion could be developed ---that preserve intended uses, while allowing flexibility for technical issues arising from aeration system operation in hydropower applications. The applicant further states that any DO criterion reassessment would be documented as part of the 401 certification, that the current standard would not bcchanged and would still supportdesignated uses, and that a use attainability analysis would not be necessary unless the use(s) of the tailwater are modified.

The technical issues referred to above are associated with the difficulty of aeration systems to maintain fixed levels of DO in hydropower applications. Although the application states that the DO criterion could be modified as long as it supports the goals for water use in the river, no evidence has been presented, to'date, indicating that the development of site specific DO criterion is practical, nor is there preliminary evidence indicating that the development of site specific DO criterion would offer the same level of protection provided by the current DO criteria. Further discussion among affected parties is warranted before resources are expended on the development of site specific DO criterion.

The applicant also indicates that the installation of the line diffusers will enhance the DO concentrations to levels exceeding the current criterion of 5 mg/l of DO, barring extreme circumstances. The frequency and duration of these events should be explored prior to the consideration of site specific DO criterion, noting that under particular natural conditions water quality criteria would not necessarily apply [see Standard 8,CT DEP Water Quality Standards, effective April 8, 1997).

Mercury Studies

Sufficient scientific literature exists documenting that reservoirs in general have a tendency to produce levels of mercury concentrations in resident biota higher than those found in a natural waterbody. The issue ofmercury and methylation levels and possible links to water level fluctuations in large storage reservoirs has been raised previously by EPA and others in relation to FERC licensed projects.

EPA requested in its comments on the draft application that the final application address this issue. While some additional information was provided in the final application in Section 2.2.2 of Exhibit E is does not address our request with respect to whether mercury bio-availability is

increased from project operation.

2. Instream Flows

Minimum flows in bypasses and streamflow fluctuations have been raised as an issue by resource agencies since the beginning of the relicensing process. Comment letters from CT DEP and the U.S. Fish and Wildlife Service (USFWS) on the Initial Consultation Document both requested "run-of-river" operation at Bulls Bridge and Falls Village Project. CT DEP requested minimum flow releases in the bypass reaches at each dam based on a discharge rate of 0.5 cubic feet per square mile (0.5cfsm).

Section 401 of the CWA requires that any applicant for a federal license or permit that may result in a discharge into navigable waters must receive certification from the state within which the discharge will originate to demonstrate project compliance with applicable state water quality standards. Bypass flows are important for upstream and downstream fish passage and to provide year round habitat for fish and aquatic life. While EPA will provide comments during the CT DEP Section 401 process for the project, we believe that it is important to communicate EPA views on project related flows early in the process.

Section 8.3 of the final application describes disagreements with resource agencies. The responses to resource agency recommendations reflect the applicant's view, which is not shared by the state and federal resource agencies. For example, on page E-1 85 the comment is made that the proposed bypass flows are more reasonable than ABF (aquatic base flow) given the "FERC policy of improving an existing baseline." EPA's analysis and recommendations are based on its understanding of CWA goals as implemented through the Connecticut Clean Water Act and its water quality standards regulations.

EPA reviewed flow studies accompanying the application to determine flows necessary to provide adequate fish habitat and other aquatic life habitat (macro-invertebrates), including flow releases to the bypass reaches. Flows must meet all applicable elements of the state water quality standards including supporting designated uses, (which include providing habitat for fish and aquatic life, wildlife and recreation), criteria and antidegradation policies. As we stated in our comments on the draft application, we believe that the proposed bypass flows are too low and should be raised to increase habitat for fish, aquatic invertebrates and resident fish and so that they meet all applicable elements of the state water quality standards including supporting designated and existing uses and criteria.

Bain and Travnichek' and others predict that fluctuating streamflows below hydroelectric

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'Mark B. Bain and Vincent H. Travnichek, 1996, Assessing Impacts and Predicting Restoration of Flow Alterations in Rivers Developed for Hydroelectric Power Production, IAHR Symposium on Habitat Hydraulics.

projects change the densities and species compositions of fish differently in shoreline and midstream habitats and the extent of change.depends on the severity of flow regulation and the distance downstream of hydroelectric dams.

The final application itself notes that while existing operational regimes cause habitat fluctuations of a similar or lesser range than natural flowvariations, they may occur at a much greater frequency. It acknowledges that peaking operations are most likely to reduce habitat quality at times when sensitive life stages are most abundant --typically late spring and early summer. The application states that adoption of a run-of- river or reduced peaking mode at critical times in the life cycles ofresident species could enhance reproductive success.

CT DEP found in its analysis of the applicant's data that the reduced occurrence of fluvial specialists (and the presence of habitat generalists) reflects the influence operation of existing stations has had on community structure. CT DEP also believes that it is reasonable to conclude that operating schemes have had a negative effect on the freshwater-mussel community of the upper Housatonic.

In many relicensing situationsin New England, and other flow diversion projects, EPA recommends use of the USFWS New England Flow Policy. A key element of the policy is the concept of ABF. In hydrological terms, ABF is based on the median August flow, as calculated by USFWS. The default value, in the absence of suitable long term gauging, is a flow of 0.5 cubic feet per square mile.

Falls Village

At the present time there are no statutory minimum flows at the Falls Village Project and the 1900 foot bypass only receives flows when flow in the river exceeds 1700 cubic feet per second (cfs). The applicant proposes to increase minimum streamflow from 0 cfs to 80 cfs, or inflow, in the 1900 foot bypass reach and provide a minimum of 200 cfs below the facility.

EPA continues to believe that the CT DEP recommendation for run-of-river, on an instantaneous basis, and 3 15 cfs (0.5 cfsm) to the bypass reach are supported by the instream flow analyses and will act to reduce the negative effects current flow fluctuations have on fluvial specialists .

Bulls Bridge

The Bulls Bridge development consists of an impoundment created by two dams and a 1.9 mile bypass/power canal. There is a statutory minimum total flow of 100 cfs, which includes19 cfs from the Tenmile River. Leakage through the Bulls Bridge turbines is about 50 cfs which when added to the bypass flows provides for a continuous project flow of 150 cfs. The applicant proposes to increase the minimum flow from 81 to 13 1 cfs in the bypassed reach of the Housatonic River and to provide a minimum flow of 200 cfs at the Bulls Bridge facility.

Flow study data show that increased flows beyond that proposed by the applicant will provide more suitable habitat for various species and life stages studied. For example in Reach 4A (lower Bulls Bridge bypass), the flow which produces the maximum weighted usable area/ 1000 ft is 350 cfs for juvenile Brown Trout, 450 cfs for adult Brown Trout, 500 cfs for adult longnose dace'and 850 cfs for juvenile longnose dace. CT DEP and USFWS both recommend 200 cfs to the bypass'reach and a run-of-river operational mode. EPA believes that an operational mode of run-of- river (instantaneous basis) and bypass flows of at least 200 cfs are necessary.

Stevenson Dam

Leakage past the generating units and project structures is normally-between 100 and 200 cfs, with an average of approximately 130 cfs. A continuous minimum flow release of 80 cfs, or inflow. Additionally the applicant proposes a bulk release every four days, equivalent in volume to a continuous flow release of 280 cfs over a 4 consecutive day period, or the inflow whichever is less. 280 cfs over a four consecutive day period, constrained by inflow. Bulk releases would be limited to a maximum of 6,720 cfs. As with Falls Village and Bulls Bridge projects, EPA believes a continuous flow closer to ABF, ie. 0.5 cfsm (770 cfs) would greatly alleviate current habitat fluctuation in the tailrace downstream of the project.

The applicant suggested, in response to comments on the draft apphcation, that while a continuous discharge of about 1000 cfs would flush the dredge holes at the same rate as the current bulk release of approximately 6500 cfs, the vertical and horizontal particle mixing likely would not be as great.. This is based in large part on modeling results contained in Appendix D. EPA believes that the applicant should conduct a field study to validate the model predictions, and to determine whether predicted improvements in dissolved oxygen levels in the dredged holes would occur during more continuous releases.

3. Additional impoundment studies

Weekly pool fluctuations of 4.5 feet behind the Shepaug dam and 2.5 feet behind the Stevenson dam are allowable at permitted under the current license (Exhibit B). In its comments on the draft application the USFWS requested that the applicant conduct a study to determine if reservoir drawdowns associated with normal peaking operations impact wetlands, littoral zone spawners, nesting waterfowl, furbearers, and herptiles. No such study is included in the application. While there is a wetland analysis in the final application, it only maps wetlands and does not analyze. the effects on the wetlands from water level fluctuations.

EPA and USFWS believe that if the applicant chooses to change the operating mode to run-of-river that these studies would not be necessary. However, that change is not proposed in either the draft or final application. Hence, EPA also believes that these studies will be necessary. The studies should examine the effects of the maximum drawdowns allowable under the current license. The littoral zones of these represents many miles of habitat that, under the proposed operating mode, is unusable on a daily or weekly basis. The application must quantify the impacts to the littoral community.

EXHIBIT 3.2

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
WESTERN DIVISION

UNITED STATES OF AMERICA,	)	CIVIL ACTION NOS. 99-30225-MAP (Consolidated)
Plaintiff,	)	
v.	)	
GENERAL ELECTRIC COMPANY,	)	
Defendant.	)	

DECLARATION OF DEAN L. TAGLIAFERRO IN SUPPORT OF PROPOSED GE-PITTSFIELD/HOUSATONIC RIVER SITE CONSENT DECREE, MEMORANDUM IN SUPPORT OF MOTION TO ENTER, AND RESPONSE TO PUBLIC COMMENTS

I, Dean L. Tagliaferro, hereby depose and state as follows:

1. I am an On-Scene Coordinator ("OSC") with the United States Environmental Protection Agency ("EPA"), Office of Site Remediation and Restoration, located in Boston, Massachusetts. I have been employed by EPA for over 14 years. I have been employed as an OSC for 13 of those years. I have a Bachelors of Science Degree in chemical engineering from Tufts University, located in Medford, Massachusetts.

2. As an OSC with EPA I have overseen the response to a number of sites including: the Cohen Property Site, the Jard Company Site, Modem Electroplating, Freetown Screw, Hows Comer, Fletcher Paint, and the GE Building 68 Site. The response actions for these sites included: soil and sediment excavation and off-site disposal; on-site treatment

of contaminated soils; capping; sampling, characterization and off-site disposal of the contents of bulk containers (e.g., drums, vats, tanks, etc.); and the construction of a pump house and the installation of a water distribution system (mains and service laterals). In my current position as OSC for the GE-Pittsfield/Housatonic River Site (the "Site"), my responsibilities include being project manager for the Upper %-Mile Reach Removal Action and for source control activities located adjacent to the Upper %-Mile Reach.

3. I am familiar with the response actions that have been, are being, and are proposed to be undertaken at the Site, with documents relating to the Upper %-Mile Reach Removal Action, and with documents relating to the technical information contained in Response Numbers 58, 59, 60, 62, 63, 65 and in Section III.H.1.(Background). I have reviewed the "United States' Memorandum in Support of Motion to Enter Consent Decree" (the "Memorandum") and the "United States' Response to Comments on the Proposed Consent Decree" prepared by EPA and Department of Justice attorneys in this matter. The technical information contained in Response Numbers 58, 59, 60, 62, 63, 65, and in Section III.H.1.(Background) in the Response to Comments is based upon my knowledge of the Site and is accurate to the best of my knowledge.

4. In October 1999, the General Electric Company ("GE") initiated performance of the Removal Action for the Upper ½ Mile Reach of the Housatonic River, under EPA oversight. Baaed upon my review of information submitted by GE, as of May 22, 2000, GE had excavated approximately 3,580 cubic yards of contaminated sediments and bank soils, and had also removed approximately 1,750 gallons of Dense Non-Aqueous Phase

Liquids from the Housatonic River, in implementing the Upper ½ Mile Reach Removal Action.

5. I declare under penalty of perjury that the foregoing is true and correct.

DATED this 19 day of July, 2000.

Dean L. Tagliaferro

Dean L. Tagliaferro, On-Scene Coordinator
U.S. Environmental Protection Agency

EXHIBIT
3.3

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
WESTERN DIVISION

UNITED STATES OF AMERICA,	)	CIVIL ACTION NOS.
	)	99-30225-MAP
	)	(Consolidated)
Plaintiff,	)	
	)	
v.	)	
	)	
GENERAL ELECTRIC COMPANY,	)	
	)	
Defendant.	)	

DECLARATION OF CHESTER L. JANOWSKI IN SUPPORT OF PROPOSED GE-PITTSFIELD/HOUSATONIC RIVER SITE CONSENT DECREE, MEMORANDUM IN SUPPORT OF MOTION TO ENTER, AND RESPONSE TO PUBLIC COMMENTS

I, Chester L. Janowski, hereby depose and state as follows:

1. I am a Remedial Project Manager ("RPM") with the United States Enviromnental Protection Agency ("EPA"), Superfund Division, located in Boston, Massachusetts. I have been employed by EPA for approximately 25 years. I have been employed as a RPM for 15 of those years. I have a Bachelor of Science Degree in Civil Engineering from Lowell Technological Institute, located in Lowell, Massachusetts.

2. As a RPM with EPA I have overseen the response to a number of sites including:

Auburn Road Landfill Site in Londonderry, NH

Keefe Environmental Services Site in Epping, NH

Sylvester/Gilson Road Site in Nashua, NH

Baird & McGuire Site in Holbrook, MA

Groveland Wells Site in Groveland, MA

3. The remedies for these sites include landfill capping (Auburn Road), groundwater extraction and treatment (Keefe Enviromnental Services, Sylvester, Baird & McGuire, and Groveland), and soil incineration (Baird & McGuire).

4. In my current position as team member for the GE-Pittsfield/Housatonic River Site (the "Site"), my responsibilities include oversight of all General Electric Company ("GE") submittals and activities for the Allendale School Removal Action, management of EPA contractors for the 1 ½ Mile Reach Removal Action including the preparation of an Engineering Evaluation/Cost Analysis, and oversight of GE submittals for the Newell Street Area I Removal Action.

5. I am familiar with the response actions that have been, are being, and are proposed to be undertaken at the Site and with documents related to the Allendale School Removal Action and the 1% Mile Reach Removal Action. I have reviewed the "United States' Memorandum in Support of Motion to Enter Consent Decree" (the "Memorandum") and the "United States' Response to Comments on the Proposed Consent Decree" prepared by EPA and Department of Justice attorneys in this matter.

6. Based upon my direct oversight of GE's performance of the Allendale School Removal Action, and based upon information contained in the Final Completion Report dated February 2000 submitted by GE that I have reviewed, GE removed approximately 42,000 cubic yards of soil in conjunction with the Allendale School Removal Action, and completed the Allendale School Removal Action in November of 1999.

7. On March 1, 2000, I presented, to the Citizen's Coordinating Council, a summary of the cleanup alternatives that EPA is considering for the 1 ½ Mile Reach of the Housatonic River in its final draft Engineering Evaluation/Cost Analysis ("EE/CA"). EPA's contractors that prepared the EWCA under EPA oversight also gave a presentation. EPA also auswered questions and solicited input on the EE/CA from the Citizen's Coordinating Council and other members of the public.

8. On May 17, 2000, together with Bryan Olson, GE Team Leader, and John Kilborn, EPA Counsel, I gave a presentation to EPA's Remedy Review Board (the "Board") on the EE/CA and sought the Board's review of the EE/CA. GE submitted comments to the Region for the Board dated April 13, 2000. The Housatonic River Initiative submitted comments to the Region for the Board dated April 14, 2000. I submitted both of these commentsto the Board prior to my May 17 presentation to the Board. I considered and discussed these comments, and other input from the public, with the Board.

9. On July 17, 2000, EPA issued a final draft EE/CA with a proposed recommended removal action for the 1 ½ Mile Reach for a public comment period in excess of 30 days.

10. I declare under penalty of perjury that the foregoing is true and correct.

DATED this 19 day of July, 2000.

Chester L. Janowski, Remedial Project Manger
U.S. Environmental Protection Agency

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
WESTERN DIVISION

UNITED STATES OF AMERICA,	)	CIVIL ACTION NOS.
	)	99-30225-MAP
	)	(Consolidated)
Plaintiff,	)	
	)	
v.	)	
	)	
GENERAL ELECTRIC COMPANY,	)	
	)	
Defendant.	)	

DECLARATION OF J. LYN CUTLER
IN SUPPORT OF
PROPOSED GE-PITTSFIELDMOUSATONIC RIVER SITE CONSENT DECREE, MEMORANDUM IN SUPPORT OF MOTION TO ENTER, AND RESPONSE TO PUBLIC COMMENTS

I, J. Lyn Cutler, hereby depose and state as follows:

1. I am the Section Chief, Special Projects, in the Bureau of Waste Site Cleanup for the Massachusetts Department of Environmental Protection ("MDEP") Western Regional office, located at 436 Dwight Street, Springfield, Massachusetts. I have been employed by MDEP for seven years, and have held my current position for all of those years. I have a Masters of Science in Geology with a concentration in Hydrogeochemistry from Indiana University, located in Bloomington, Indiana. I also have a Bachelor of Science in Geology, with honors, from Denison University, located in Granville, Ohio.

2. In my capacity as Section Chief, Special Projects, I am responsible for supervising MDEP's oversight of investigative and response actions (site management activities) concerning all of the General Electric Company (GE) sites in and around Pittsfield, Massachusetts and the Housatonic River.

3. During my tenure as Section Chief, Special Projects, I have overseen the investigations and/or response actions at the following GE and adjacent sites (as defined by MDEP): the Allendale Schoolyard; East Street Area I; East Street Area II; Hill 78 Landfill Area; the Housatonic River; Lyman Street Parking Lot; Newell Street Area II; Silver Lake; the Remaining Former Oxbows; and over two hundred (200) residential and commercial properties which have been investigated and/or remediated due to potential PCB-contaminated fill from GE facilities.

4. The response actions have included: excavation and removal, posting, fencing, enhanced vegetative barriers, capping, and placement of Activity and Use Limitations (AULs) for soil contamination; oil recovery and "pump and treat" systems for groundwater contamination; and removal of contaminated sediment and bank soils. I have also been involved in recommending and implementing fish and waterfowl consumption advisories.

5. I am familiar with the response actions that have been, are being, and are proposed to be, undertaken at the site and am familiar with the documents relating to MDEP's cleanup of residential fill properties, groundwater at the site and the West Branch of the Housatonic River. I have reviewed the "United States' Memorandum in Support of Motion to Enter

Consent Decree" (the "Memorandum") and the "United States' Response to Comments on the Proposed Consent Decree" prepared by EPA and Department of Justice attorneys in this matter. The technical information contained in Response Numbers 12 and 52 in the Response to Comments regarding GE's cleanup of residential fill properties and groundwater at the site is based upon my knowledge of the site and is accurate to the best of my knowledge.

6. Since 1997, MDEP has required GE to investigate and remediate residential properties on which unacceptable levels of PCB-contaminated fill material have been found. Upon completion by GE of a residential fill property response action, GE submits a Response Action Outcome statement subject to MDEP review and approval. Pursuant to MDEP's requirements and under MDEP's approvals, since 1997 GE has remediated over 100 residential till properties so that any remaining levels of PCB contamination do not pose an unacceptable risk to human health or the environment, according to current standards. This program is continuing, with GE proposing to remediate an additional 30 residential till properties in the year 2000.

7. In December 1999, MDEP formally notified GE of PCB contamination in sediment of the West Branch of the Housatonic River and required GE to submit for MDEP review and approval a Scope of Work that addressed the following: to define the nature and extent of sediment contamination in portions of the West Branch, to delineate the presence of the PCB sediment 'hot spot' in the West Branch adjacent to Dorothy Amos Park; and, to

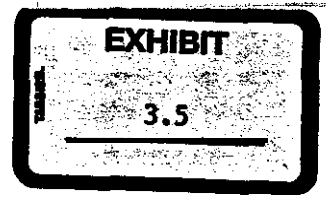
evaluate the groundwater beneath Dorothy Amos Park as a potential source of PCB contamination to the West Branch sediments.'

8. I declare under penalty of perjury that the foregoing is true and Correct.

DATED this 19th day of July 2000.

J. Lyn Cutler, Section Chief, Special Projects
Massachusetts Department of Environmental Protection

[1] Activities related to the West Branch are not governed by the proposed Consent Decree



IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
WESTERN DIVISION

UNITED STATES OF AMERICA, *Plaintiff*	CIVIL ACTION NOS. 99-30225-MAP
v.	(Consolidated)
GENERAL ELECTRIC COMPANY, Defendant	JULY 17, 2000

DECLARATION OF CHARLES FREDETTE IN SUPPORT OF PROPOSED GE-PITTSFIELD/HOUSATONIC RIVER SITE CONSENT DECREE MEMORANDUM IN SUPPORT OF MOTION TO ENTER AND RESPONSE TO PUBLIC COMMENTS

I, Charles Fredette, hereby depose and state as follows:

1. I am a Supervising Sanitary Engineer with the Connecticut Department of Environmental Protection ("CTDEP"), Bureau of Water Management, Planning and Standards Division, located in Hartford, Connecticut. I have been employed by CTDEP for approximately 26 years. I have been the Technical Lead for the State/EPA agreement on the interstate transport of pollutants (including PCBs) from 1979 to 1984; the Project Manager for the CTDEP/GE work agreements for PCBs in the Housatonic River from 1984 to the present; the Supervisor of the state's -Watershed Program from 1996 to the present; the Supervisor of the state's Ambient Water Quality Monitoring Program from 1982 to 1994; and the Supervisor of the state's Lakes Management Program from 1982 to the present. I have a Bachelor of Science Degree, cum laude, in Zoology from the University of Massachusetts

in Amherst and a Master of Science in Environmental Engineering from the University of Massachusetts in Amherst.

2. As a professional in the Planning and Standards Division of the Water Bureau, I have assisted in the evaluation, modeling and preparation of the remediation recommendations for lakes and rivers state wide, including the Housatonic River.

3. In my current position as the Supervisor of the Watershed Management Program, my responsibilities include the state wide planning and management of surface water pollution in rivers and lakes of the state.

4. I am familiar with the response actions that have been, are being, and are proposed to be undertaken in the Housatonic River pursuant to the terms of the proposed Consent Decree in the above captioned action. I have reviewed the "United States' Memorandum in support of Motion to Enter Consent Decree" (the "Memorandum") and the "United States' Response to Comments on the Proposed Consent Decree" prepared by United States Environmental Protection Agency and Department of Justice attorneys in this matter. The technical information contained in Responses Numbered 27,28(A), (B), (D), (E) and (F), 29, 30, 31, 34, 35, 36 and 38 is based upon my knowledge of the Housatonic River and is accurate to the best of my knowledge.

5. CTDEP and the General Electric Company (GE) have entered into a monitoring agreement titled Housatonic River Follow-Up Cooperative Agreement and dated October 22, 1999. A copy of said agreement is attached hereto as Attachment 1.

6. I declare under penalty of perjury that the foregoing is true and correct.

Charles Fredette, Water Management Bureau
Connecticut Department of Environmental Protection

STATE OF CONNECTICUT)
) ss. Hartford
COUNTY OF HARTFORD)

Sworn and subscribed to before me this 17th day of July, 2000.

John M. Looney
Commissioner of the Superior Court

HOUSATONIC RIVER FOLLOW-UP COOPERATIVE AGREEMENT

This Follow-up Cooperative Agreement sets forth understandings between the State of Connecticut Department of Environmental Protection (hereinafter "CDEP") and the General Electric Company (hereinafter "GE") with respect to further activities to be performed by GE regarding the monitoring of concentrations of polychlorinated biphenyls (PCBs) in aquatic biota in the Housatonic River in Connecticut.

WHEREAS the CDEP and GE previously executed the Housatonic River Cooperative Agreement, which became effective on December 1, 1990 (the " 1990 Cooperative Agreement"); and

WHEREAS the 1990 Cooperative Agreement required GE, among other things, to monitor trends in PCB concentrations in aquatic biota at certain locations within the Housatonic River in Connecticut during 1990, 1992, and 1994, to submit reports to the CDEP on the results of that monitoring during 1991, 1993, and 1995, respectively, and to assist with a public information program in Connecticut relating to the results of that monitoring program; and

WHEREAS GE fulfilled its obligations under the 1990 Cooperative Agreement to carry out those activities; and

WHEREAS the 1990 Cooperative Agreement terminated by its own terms on April 15, 1995; and

WHEREAS, notwithstanding the expiration of the 1990 Cooperative Agreement, GE voluntarily conducted similar monitoring activities during 1996 and 1998, submitted a report on the 1996 monitoring results during 1997, and will submit a report on the 1998 monitoring results later in 1999; and

WHEREAS both the CDEP and GE believe that it would be appropriate for GE to continue these monitoring activities and to continue to assist with public information activities relating to such monitoring;

NOW, THEREFORE, the CDEP and GE hereby agree as follows:

I. Additional Monitoring and Reports

A. GE shall monitor PCB concentrations in fishes and benthic invertebrates from the Connecticut portion of the Housatonic River during 2000, 2002, and 2004, and shall submit reports containing the monitoring data to the CDEP no later than August 1 of 2001, 2003, and 2005, respectively.

B. The sampling stations and the taxa to be monitored at those sampling stations shall be the same as in the 1994, 1996, and 1998 monitoring studies: brown trout, smallmouth bass, and caddisflies, dobsonflies, and stoneflies at (West) Cornwall, smallmouth bass at Bulls Bridge, smallmouth baas at Lake Lillinonah, and smallmouth bass at Lake Zoar; provided, however, that these sampling stations and/or the taxa monitored at these stations may be revised for any given year if GE so proposes and the CDEP agrees in writing. The number of specimens to be collected and analyzed during each study shall be determined through a proposal by GE and written approval by the CDEP.

C. The reports to be submitted in 2001, 2003, and 2005 shall be comparable in scope to the reports that GE submitted under the 1990 Cooperative Agreement. Likewise, the laboratory analysis methodology and Quality Assurance/Quality Control procedures to be employed by GE, and the statistical trend analyses to be presented by GE in the reports, shall be comparable to the methodology and procedures employed and the analyses presented under the 1990 Cooperative Agreement.

II. Public Information Activities

A. GE shall cooperate with the CDEP in the conduct of public information activities to publicize the results of these monitoring studies, by providing such assistance as is reasonably requested by the CDEP and agreed to by GE. Such assistance may include preparing pamphlets summarizing the fish monitoring data, and/or preparing fish consumption advisory signs for posting along the Housatonic River.

III. Reservation of Rights

A. Nothing in this Follow-up Cooperative Agreement shall be construed as an admission by GE of any liability or responsibility, with respect to the presence of PCBs in the Housatonic River, under any federal, state, or local law, regulation, ordinance, or other legal authority, or as a waiver by GE of any defense, claim, or right that GE may have in any action or proceeding that may be initiated by the State of Connecticut or any other party relating in any way to the presence of PCBs in the Housatonic River.

B. GE's sole obligations and responsibilities under this Follow-up Cooperative Agreement shall be as set forth herein.

C. Nothing in this Follow-up Cooperative Agreement shall be construed as creating any rights in third parties not signatory to it.

D. Nothing in this Follow-up Cooperative Agreement shall in any way affect the rights, obligations, and reservations of rights of either GE or the State of Connecticut as set forth in a Consent Decree executed by GE, the State of Connecticut, and other governmental agencies

and lodged in the United States District Court for the District of Massachusetts on October 7, 1999, in United States et al. v. General Electric Company.

This Agreement shall become effective upon the date of the signature of the Commissioner of CDEP, as set forth below, and shall terminate on September 1, 2005.

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
Arthur J. Rocque, Jr.
Commissioner

DATE: 10/22/99

GENERAL ELECTRIC COMPANY

BY: Michael T. Carroll
Michael T. Carroll
Manager, Pittsfield Remediation Programs
Corporate Environmental Programs

DATE: 10/12/99